

**REMARKS****Section 112 Rejections:**

The outstanding Official Action rejects claims under 35 USC Section 112, asserting that the claims recite an emulsion but that applicants claims do not appear to constitute an emulsion. Applicants submit that the claims comply with the requirements of Section 112. The claims recite an emulsion comprising the resin particles described with particularity in the claims. Applicants acknowledge that many of the claims recite an emulsion, and that an emulsion is generally recognized as a stable mixture of two or more immiscible liquids held in suspension by emulsifiers. However, applicants assert that the claims need not recite such common and acknowledged features. It is well settled that it is not a requirement that the claims recite all of the various features of a claimed invention, but only those that are necessary to distinguish the invention over the relevant art. This applicants have done.

In the interest of expediting examination, and without conceding any asserted lack of compliance with Section 112, applicants hereby amend the claims to recite "a resin component" rather than "an emulsion." This is not intended to narrow the scope of the claim, but merely to bring greater clarity and to facilitate examination and disposition. Support for the amendment is found throughout the specification, e.g., at p. 9, line 22 - p. 10, line 9 (describing the resin component as derived from the emulsion described throughout the specification); and p. 12, line 23 – p. 13, line 6.

An additional clarifying amendment is made, e.g., to claim 1, wherein the term "essentially" is replaced by "substantially." This is merely to bring the language of

the claim into closer alignment with the language of the specification, e.g., at p. 6. line 23; and at p. 10, line 15.

The claims have also been amended to improve clarity of the recitation of the  $T_g$  of the resin particles (B). Specifically, the  $T_g$  is now said to be "greater than  $0^\circ$  and less than or equal to  $60^\circ\text{C}$ ." E.g., claims 1, 5, and 11. Applicants urge that the language is merely a grammatical modification of that found within the specification, and the original claims, and would have been understood from same by one of ordinary skill in the art.

Prior Art Rejection:

The copolymer (B) used by Sigeki et al. (JP 08118560) has  $T_g$  of " $-70^\circ\text{C}\sim 0^\circ\text{C}$ ". In contrast, the resin particle (B) used in the present invention has  $T_g$  "greater than  $0^\circ\text{C}$  and less than or equal to  $60^\circ\text{C}$ ". The resin component of the instant claims is distinct from that reported by Sigeki.

Further, paragraph [0002] of Sigeki states:

A surface of base material sheet such as paper is coated with a releasable adhesive-composition and then it is printed to prepare an information-carrier sheet. The information-carrier sheet is double-folded or three-folded, and then fastened under a high pressure by passing between rolls of sealer to form a confidential postcard. The number of such postcard is growing remarkably. The fastened sheet of the postcard has to be easily peeled off by a finger. After the peeling off, the sheet has not to be easily re-fastened. It is necessary to realize such performances for the confidential postcard.

Furthermore, paragraph [0018] of Sigeki states:

The core of the emulsion polymer (C) particle in the present invention, i.e., the copolymer (B) which constitutes the interior of a particle, has a glass transition temperature of  $-70^\circ\text{C}$  to  $0^\circ\text{C}$ , preferably  $-60^\circ\text{C}$  to  $-10^\circ\text{C}$ , more preferably  $-60^\circ\text{C}$  to  $-20^\circ\text{C}$ . When it is less than  $-70^\circ\text{C}$ , a problem may be occurred in thermal resistance and blocking resistance, and furthermore, adhesive strength may cause a trouble in peeling performance. When it is more than  $0^\circ\text{C}$ , a sufficient fastening performance cannot be realized.

Consequently, when  $T_g$  of the copolymer (B) is more than  $0^{\circ}\text{C}$ , the fastening performance becomes insufficient, and as a result the information-carrier sheet cannot be used, e.g., as a confidential postcard, which has to be double-folded or three-folded. Sigeki paragraph [0002]. Thus, the polymer (B) of Sigeki must have  $T_g$  of  $-70^{\circ}\text{C}$  to  $0^{\circ}\text{C}$ .

In contrast, the resin component of the claimed invention is used for forming a protective layer of thermal recording material. The resin particle (B) in the emulsion has a high  $T_g$ , *i.e.*, greater than  $0^{\circ}\text{C}$  and less than or equal to  $60^{\circ}\text{C}$ , to increase heat resistance of the protective layer. If the  $T_g$  of resin particle (B) is lower, *i.e.*, less than  $0^{\circ}\text{C}$ , the adhesive property of protective layer is too high and it decreases the printing performance. Furthermore, when the protective layer melts, it becomes impossible to print on the sheet.

The present invention is patentably distinct from Sigeki. Specifically, the resin particle (B) in the claimed component is distinct from the resin of Sigeki. Sigeki neither teaches nor suggests the subject of the present claims, nor would it have motivated one of skill in the art to produce the resin components or the thermal recording material of the present invention. Finally, even if it is asserted that Sigeki might have motivated one of ordinary skill in the art to try to make such resin components or thermal recording material as are claimed, there would have been no assurances that one would have derived the precise components and materials as are claimed, nor would there have been assurances that such components or materials would have worked. Accordingly, no *prima facie* case of obviousness has been made. Applicants respectfully request reconsideration and withdrawal of the outstanding rejection over Sigeki.

In view of the foregoing amendments and remarks, applicants respectfully request reconsideration and withdrawal of all outstanding rejections. Applicants submit that the claims are now in condition for allowance, and respectfully request formal notification to that effect. If, however, the Examiner perceives any impediments to such a notice of allowability, whether substantive or formal, the Examiner is encouraged to call Applicants' attorney at the number provided below. Such informal communication will expedite examination and disposition of this case.

Respectfully submitted,

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FROM BURNS DOANE SWECKER & MATHIS)

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